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BY- ALLEN, VERNON L. LEVINE, JOHN M.
WISCONSIN UNIV., MADISON

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USING THREE FIFTH-GRADE CLASSES IN RACINE, WISCONSIN, AS AN EXPERIMENTAL GROUP AND THREE FIFTH-GRADE CLASSES AS A CONTROL GROUP, CONFORMITY TO GROUP PRESSURE WAS COMPARED FOR 76 SUBJECTS RECEIVING A FOUR-WEEK PROGRAM OF CREATIVITY TRAINING AND FOR 88 MATCHED CONTROLS. EFFECT OF CREATIVITY TRAINING ON CONFORMITY WAS QUITE SPECIFIC, WITH CONFORMITY REDUCED ON ITEMS HAVING CORRECT ANSWERS BUT NOT ON SUBJECTIVE ITEMS. RESULTS ALSO SHOWED THAT SUBJECTS RECEIVING CREATIVITY TRAINING RESPONDED TO ITEMS MORE SELECTIVELY THAN DID MEMBERS OF THE CONTROL GROUP. IN ADDITION, CREATIVITY TRAINING REDUCED OVERALL CONFORMITY FOR LOW IQ SUBJECTS BUT NOT FOR SUBJECTS OF AVERAGE AND HIGH IQ LEVELS. EVIDENCE SUGGESTS THAT THE RELATION BETWEEN CONFORMITY AND CREATIVITY IS COMPLEX AND PERHAPS MEDIATED BY UNCONSIDERED VARIABLES. IT WAS CONCLUDED THAT THERE IS A CAUSAL RELATION BETWEEN CREATIVITY AND CONFORMITY DUE TO THE TRANSFER OF COMMON SKILLS ACROSS SITUATIONS. EA 001 341 IS A RELATED DOCUMENT. (AUTHORS/JK)

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CREATIVITY AND CONFORMITY

VERNON L. ALLEN and JOHN M. LEVINE

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COGNITIVE LEARNING

THE UNIVERSITY OF WISCONSIN
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DEVELOPMENT

Technical Report No. 33

CREATIVITY AND CONFORMITY

Vernon L. Allen and John M. Levine

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
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PREFACE

One major program of the Wisconsin R and D Center for Cognitive Learning is Program 1 which is concerned with fundamental conditions and processes of learning. This Program consists of laboratory-type research projects, each independently concentrating on certain basic organismic or situational determinants of cognitive learning, but all united in the task of providing knowledge which can be effectively utilized in the construction of instructional systems for tomorrow's schools. Any complete study of the variables which influence human learning—whether in or out of the classroom—must ultimately consider social influences. Professor Allen and his associates are actively engaged in a research project directed towards the analysis of social determinants of performance involving basic cognitive skills.

In this particular research, Professor Allen investigated the effects of creativity training on subsequent conformity behavior of fifth-grade children. The results not only suggest a causal relationship between creativity and conformity, but also provide information concerning the conditions under which conformity to social pressure can most effectively be reduced.

Harold J. Fletcher
Director, Program 1

CONTENTS

		page
	Abstract	vii
I.	Introduction	1
II.	Method	3
	Subjects	3
	Procedure	3
	Creativity Training Program	3
	Conformity Testing	3
	Stimuli	4
	Method of Analysis	4
III.	Results	6
	Creativity Training	6
	Conformity	6
	Attitude and Visual Items	6
	Correlations Among Continuous-Response Items	7
	Conformity on Other Items	7
IV.	Discussion	9
	References	11

LIST OF TABLES

Table		
1	Mean Conformity Scores on Attitude and Visual Items for Males and Females	6
2	Mean Conformity Scores on Attitude and Visual Items as a Function of IQ Level	7
3	Average Intercorrelations of Conformity Scores on Attitude and Visual Items in Control and Experimental Conditions	7
4	Mean Conformity Scores of Individually Analyzed Items in Control and Experimental Conditions	8

ABSTRACT

Conformity to group pressure was compared for 76 fifth-grade Ss receiving a four-week program of creativity training and for 88 matched controls. Effect of creativity training on conformity was quite specific: conformity was reduced on items having correct answers, but not on subjective items. Results also showed that Ss receiving creativity training responded more selectively than controls to items similar in content, agreeing with the group on some items but not on others. In addition, the creativity training reduced overall conformity for low IQ Ss but not for Ss of average and high IQ levels. It was concluded that there is a causal relation between creativity and conformity, due to the transfer of common skills across the situations.

I

INTRODUCTION

Creativity and conformity seem to be antithetical psychological processes. The generalization receives support from both casual observation and empirical research. Investigators in the Berkeley Creativity Project found that among many groups of persons differing in objectively assessed creativity, conformity was greatest in groups designated as least creative (Crutchfield, 1962). Other studies of more homogeneous groups have also found that persons who scored high on creativity indices conformed less than persons who scored low (Barron, 1952, 1953, 1955; Crutchfield, 1951, 1955). Thus, substantial evidence from empirical research confirms the assertion that creativity and conformity are inversely related.

Concluding that an inverse relation exists between creativity and conformity is not completely satisfying; a theoretical explanation is needed of the psychological basis for the deleterious effect of social pressure on creativity. A convincing theoretical analysis has been provided by Crutchfield (1962b), who discusses two factors that might account for the association between conformity and creativity.

First, conformity pressure tends to create extrinsic, ego-involved motivation. Under extrinsic motivation, creativity is a means to some goal external to the solution of the immediate problem. Under intrinsic or task-involved motivation, by contrast, the creative process is a rewarding end in itself. Arousal of ego-involved or extrinsic motivation causes the individual to be concerned primarily with acceptance or rejection by the group, rather than with problem-solving. Research has shown that extremely high motivation—in this case anxiety about one's relationship to the group—leads to rigid cognitive processes detrimental to insightful problem solution. In sum, conformity pressure produces motivations that are incompatible with the cognitive flexibility essential to creative thinking.

Secondly, Crutchfield mentions personality traits of the conformist as linking conformity pressures and creativity. Conformers have been found to possess such traits as anxiety, rigidity, low ego strength, lack of spontaneity, intolerance of ambiguity, conventional attitudes, feelings of personal inferiority, dependence toward others, and orthodox values. These personality characteristics, typical of conformers, correlate negatively with creative thinking.

The theoretical analysis contributed by Crutchfield appears quite plausible; it seems reasonable that conformity pressure produces ego-involved motivation detrimental to creativity and that personality characteristics of conformers are inimical to creative thinking. Nevertheless, the relation between creativity and conformity is undoubtedly very complex, and the direction of causality certainly equivocal. For instance, would enhanced creativity result from induced resistance to group pressure? Conversely, would an increase in creative skills produce a concomitant increase in independence under group pressure? On the basis of the observed inverse relation between creativity and conformity, one might respond affirmatively to both questions. But the prediction is not as straightforward as it appears. The correlation between creativity and conformity does not, of course, designate a causal relation; some third variable might be responsible for both creativity and conformity. The present study was designed to shed light on the question of causality in the observed relation between creativity and conformity. Specifically, the study tested empirically whether experimentally enhanced creativity produced greater independence in the face of group pressure. Stating the problem in another way, it was concerned with whether experimentally increased creativity produced a psychological change which transferred to the social pressure situation, resulting in decreased conformity.

Design of the present study involved administering a creativity-training program to a group of experimental Ss. Later, Ss in the experimental group and a matched control group were subjected to social pressure from peers.

Programmed instructional material[1] developed by Crutchfield and associates (Covington and Crutchfield, 1965; Crutchfield, 1966) was used to develop and facilitate creative thinking. The training material consists of an integrated series of one-hour lessons in the form of simple detective stories designed to hold the interest of fifth- and sixth-grade children. The stories are presented in cartoon format. Each child, working alone at his own speed, discovers solutions to problems by using a series of increasingly informative cues. The problems require use of various cognitive skills essential to problem solving, without necessitating specialized or curriculum-bound knowledge.

The training material was designed to improve problem-solving skills, increase self-confidence, and strengthen positive attitudes toward problem-solving and creativity. One assumption underlying the training program was that creative thinking is a complex problem-solving process, incorporating the use and management of numerous cognitive skills. It was further assumed that such skills, possessed in varying degree by everyone, could be enhanced by proper training. Results of several previous studies with similar programmed creativity-training material have shown substantial and significant improvement on a variety of criterion tests of problem-solving and originality (Covington and Crutchfield, 1965; Crutchfield, 1966).

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[1] Further information about the training material (Series One: General Problem Solving of The Productive Thinking Program) can be obtained from its distributor, Educational Innovation, P. O. Box 9248, Berkeley, California 94719.

II
METHOD

SUBJECTS

The Ss were 164 fifth-grade students, 78 males and 86 females, of the Racine, Wisconsin, Unified school district. The Ss ranged in age from 9 to 13; 91% were 10 or 11 years old. Subjects were tested together by class; six classes, each containing 27 to 32 pupils, were used. Three classes (76 Ss) received the creativity training (experimental condition). Three other classes (88 Ss) followed the normal fifth-grade curriculum rather than the creativity program and were matched with the creativity group on Kuhlmann-Anderson IQ scores, Stanford achievement scores, and socio-economic status (control condition).

PROCEDURE

Creativity Training Program

The six classes in the present experiment were drawn from 47 classes used in a creativity training study conducted in the Racine school district.[2] The Racine study was designed to test the effectiveness of creativity training material under adverse procedural conditions: massed lessons were administered by classroom teachers who gave no assistance to students. The training program consisted of 16 self-administering lessons completed at the rate of four per week for four weeks. The lessons were revised from earlier materials (Covington and Crutchfield, 1965).

[2] The creativity project was jointly conducted by the Wisconsin Research and Development Center for Cognitive Learning at the University of Wisconsin, Madison, and the Creative Thinking Project at the University of California, Berkeley.

Conformity Testing

The conformity procedure was conducted approximately three weeks after Ss completed the final creativity-training lesson. The Ss were unaware of any connection between the conformity procedure and the prior creativity-training study. After an introduction by the classroom teacher, one of the two male Es[3] gave the following instructions:

> We are making a survey of fifth graders' judgments and opinions about a variety of things. We are comparing fifth-grade classes from several schools. We will give you answer sheets to record your answers to a number of questions. Each question will be shown on the screen in the front of the room, and I will also read the question aloud. Your job is to give the best answer on each question, by circling one of the answers provided for each question on your answer sheet. Please answer as quickly as possible, so as not to delay the entire class. No one in this school will see your individual answers, so be sure to do your own work. Please do not talk. Be sure to answer every question.

Twenty-four slides were presented; each remained on the screen for 10 seconds. The E read aloud the question for each slide. At the completion of the series, E thanked the class and departed with the slide projector and screen. The Ss believed the experiment to be finished.

In approximately one hour, the Es returned to the classroom and gave the following instructions to the Ss:

> Now we'd like to give you the same questions a second time. People sometimes want to change their minds after they've had more

[3] We are grateful to Barry W. Bragg for help in collecting the data.

time to think about a question. So you may change your mind on this second try, or you may not. In any case, we would like to know your judgment right now. Again, circle the one best answer for each question. Oh yes, we've looked at the answers given by the entire class and thought you might be interested to know what the class thought about each question. So, we'll tell you as we go along what answer the majority of the class gave. We will let you know later which class in all the schools we've tested did best on this exercise.

The series of 24 slides was again presented. In addition, a fictitious class norm purporting to represent majority opinion was given orally immediately after presentation of each slide. This norm was couched in the following terms: "Almost everyone in the class gave answer _____."

A careful debriefing explaining both the methodology and purpose of the experiment followed the slide series.

STIMULI

The stimuli were 24 slides consisting of three general types of items: visual, attitude, and achievement. The visual perception items required judgment of relationships among stimuli. For instance, the S had to determine which of nine rectangles was square. The attitude items, which were answered using a nine-point scale ranging from "strongly disagree" to "strongly agree," consisted of such statements as, "I like to read about science" and "I have a good sense of humor." The achievement items tapped factual knowledge, verbal skills, and numerical proficiency.

Sixteen of the 24 items used were critical (group pressure) items: six visual, four attitude, and six achievement. On the critical items, the purported class norm given by E was placed at the 95th percentile of responses given by a standardization group. That is, the stated norm was placed at or beyond the point at which only five per cent of the standardization group responded. The standardization group was composed of persons answering alone without seeing the responses of others. For achievement and attitude items, the standardization group was 30 fifth-grade students of the Evansville (Wisconsin) public school system. For the visual items, the standardization group was that used by Tuddenham, Macbride, and Zahn (1956).

The remaining eight stimuli were neutral items: three visual, two attitude, and three achievement. On these filler items, the reported class norm was actually the popular or correct answer.

Order of stimulus presentation was balanced in three ways. The 24 slides were divided into blocks of 12 stimuli; each block contained approximately one-half of both critical and neutral items of each of the three types (visual, attitude, and achievement). Second, the three types of items were counterbalanced within each block of 12. Finally, the critical and neutral items were counterbalanced within each block.

Items of each of the three types can be divided into continuous-response and discrete-response categories. This distinction will prove important in data analysis. Continuous-response items provide several potential answers ordered along a size or intensity dimension. For instance, a continuous-response achievement item asking "How many meals do Americans eat per day?" offers answers ranging, in order, from one to six. Alternative answers for discrete-response stimuli, on the other hand, are not ordered along a continuum. For example, responses for an achievement item requiring identification of a spelling mistake are (1) trust, (2) mesure, (3) marble, and (4) simple. Of the 16 critical items, the continuous-response category contained three attitude, five visual, and one achievement; one attitude, one visual, and five achievement items were of discrete-response type.

METHOD OF ANALYSIS

Conformity scores were computed and analyzed differently for the continuous- and discrete-response items. Using only continuous-response items, mean conformity scores for each S were calculated separately for the three attitude and five visual items. Mean scores were computed because items were very similar in content and previous research has found significant positive correlations among conformity scores on items of each type. Mean scores were calculated by summing algebraic differences between initial responses and responses given under group pressure and dividing by the number of items used. (The single continuous-response achievement item was analyzed separately.)

Generally, three attitude and five visual items were employed in computing the two mean conformity scores for each S. However, this was

not always the case, because an S's initial response occasionally fell at or beyond the simulated group norm on a particular item. In these instances, the S was not subjected to group pressure by E's report, since S's private response was as extreme as that of the group. Hence, those few items on which the S's initial response was located at or beyond the simulated group norm were eliminated from the calculations.

Using mean conformity scores for attitude and visual items, an analysis of variance was conducted; factors analyzed were sex, IQ, condition, and type of item. Duncan's New Multiple Range Test (Edwards, 1963) was then used to compare between selected means. In addition, intercorrelations were computed among mean conformity scores of both attitude and visual items in the Experimental and Control conditions.

Discrete-response items were analyzed individually because of their great variability in content and difficulty. For each item, a score was given indicating that either (a) S did not give the simulated group response in the first series, but did give this answer in the second series, or (b) S did not give the group's alleged response in either series. Subjects who gave the group response in the first series on a particular item were eliminated from calculations on that item, because they were not subject to group pressure on the later test. For each item, a mean conformity score was computed by summing across Ss' scores and dividing by the number of Ss used. Finally, t tests were employed to compare conformity on a particular item in the control and experimental conditions.

III

RESULTS

CREATIVITY TRAINING

Results of the Racine study are too extensive to permit complete presentation here; further detailed information is available elsewhere.[4] Although there were virtually no significant differences on pretraining creativity measures between Ss who subsequently received creativity training and those who did not, trained Ss performed significantly better than controls on approximately 33% of the posttraining creativity indices. Data indicated that the training program was more effective in enhancing convergent thinking (problem-solving ability) than divergent thinking (originality). While the Racine program successfully increased creativity, results were not as dramatic as outcomes of earlier studies (Covington and Crutchfield, 1965; Crutchfield, 1966). We may conclude, however, that the training program did produce the desired effect of increasing problem-solving skill, even under adverse conditions.

CONFORMITY

Attitude and Visual Items

The analysis of variance performed on the attitude and visual items yielded two significant interaction effects, indicating that results were quite complex. The Items × Condition interaction was significant at less than the .01 level ($F = 7.49$). Table 1 presents mean conformity scores on attitude and visual items in the Control and Experimental conditions for males and females. The Item × Condition means show that Ss in the control condition conformed much more than experimental Ss on the visual items; conversely, experimental Ss conformed slightly more than controls on attitude items.

Table 1

Mean Conformity Scores on Attitude and Visual Items for Males and Females

	Control	Experimental
Attitude		
Males	.53	.73
Females	.77	.74
Mean	.65	.73
Visual		
Males	.74	.19
Females	.77	.64
Mean	.75	.41

The Items × Condition × Sex interaction was significant at less than the .05 level ($F = 4.63$). Results of the Duncan New Multiple Range Tests on data in Table 1 indicated that males conformed significantly more in the control condition than in the experimental condition on visual items (.74 vs. .19), while this difference for females did not reach statistical significance (.77 vs. .64).

Although the analysis of variance did not yield a significant overall IQ effect nor a Condition × IQ interaction, interesting and suggestive relations among the means make further analysis worthwhile. Table 2 presents mean conformity scores across continuous-response items (attitude and visual) in the control and experimental conditions as a function of IQ level. Inspection of the overall mean conformity scores of Ss in the three IQ levels reveals an inverse relation between conformity and IQ; conformity decreases as IQ increases. To

[4] Olton, R. M., Wardrop, J. L., Covington, M. V., Goodwin, W. L., Crutchfield, R. S., Klausmeier, H. I., & Ronda, T. The development of productive thinking skills in fifth-grade children. Technical Report from the Wisconsin R & D Center for Cognitive Learning, University of Wisconsin, 1967, No. 34. (In press) This report contains details of design, programed materials, and results.

Table 2

Mean Conformity Scores on Attitude and Visual Items as a Function of IQ Level

	IQ Level		
	Low 1/3	Medium 1/3	High 1/3
Control condition	1.07	.60	.44
Experimental condition	.59	.62	.51
Mean	.83	.61	.47

explore the relation between IQ and conformity, Duncan's New Multiple Range Tests were conducted. Results showed that for overall mean conformity scores, the low IQ Ss conformed significantly more than the high IQ Ss ($< .05$). The medium IQ Ss, who scored midway between the highs and lows on conformity, did not differ significantly from either of the two groups.

Data in Table 2 show that the inverse relation between conformity and IQ held only for the control condition (1.07, .60, and .44 for the low, medium, and high IQ levels, respectively). For experimental Ss, conformity was not negatively related to IQ (.59, .62, and .51 for low, medium, and high IQ levels, respectively.) Further, while conformity was considerably higher in the control condition (1.07) than in the experimental condition (.59) for low IQ Ss, conformity was actually slightly higher in the experimental condition for medium and high IQ Ss. Results of the Duncan New Multiple Range Tests showed that the low IQ control Ss, who conformed significantly more than both the medium ($< .10$) and high ($< .05$) IQ control Ss, also conformed to a significantly greater degree than the low IQ experimental Ss ($< .10$). On the other hand, neither medium nor high IQ control Ss differed significantly in conformity from the corresponding Ss in the experimental condition. It appears, then, that the creativity training program successfully reduced conformity only among low IQ Ss who yielded readily in the control condition. In fact, conformity scores of medium and high IQ experimental Ss were slightly higher than in the control condition.

Correlations Among Continuous-Response Items

The final results of the continuous-response items to be discussed are the intercorrelations among mean conformity scores. Table 3 presents the average intercorrelations of conformity scores on attitude and visual items in the control and experimental conditions. In the control condition, average correlations among items of .39 and .43 were obtained for attitude and visual stimuli, respectively. In the experimental condition, conformity scores among the attitude items revealed an average correlation of .20, while the average correlation among visual items was .13. Thus, the intercorrelation for both types of items was much higher in the control condition than in the experimental condition. Comparing the average correlations of attitude items in the control and experimental groups yielded a difference significant at less than the .02 level ($z = 2.10$). A similar comparison for visual items in the two conditions showed an even larger statistically significant difference ($z = 6.23$, $p < .001$). These results indicate that intercorrelations among conformity scores on both attitude and visual items were significantly greater in the control condition than in the experimental condition. That is, Ss in the control condition reacted more uniformly across items to group pressure than did Ss who received creativity training.

Table 3

Average Intercorrelations of Conformity Scores on Attitude and Visual Items in Control and Experimental Conditions

	Attitude	Visual
Control	.39	.43
Experimental	.20	.13

Conformity on Other Items

Let us now turn to the discrete-response items which were analyzed individually because of great variability in content and difficulty. (The single continuous-response achievement item will be included in this discussion.) Table 4 presents mean conformity scores of the eight individually analyzed items in the control and experimental conditions. Inspection of the data indicates that control Ss conformed more than experimental Ss on five of the eight items; conformity differences on three of these items (2, 4, 6) attained statistical significance. Of the three items on which experimental Ss conformed more than controls, only one item (7) yielded a statistically significant difference.

These results support continuous-response data by showing generally more conformity in the control condition than in the experimental condition.

By dividing the eight items into those which have veridical answers and those which do not, additional meaning can be derived from the data. The first five items in Table 4 have only one veridical answer; for the last three items, no single clearly correct answer exists. Of the five items having correct answers, four showed greater conformity in the control condition than in the experimental condition. Conversely, on two of the three items having indeterminate answers, experimental Ss conformed more than controls. These data indicate, then, that while experimental Ss conformed more than controls on ambiguous items, they conformed less on items which had a single objectively correct answer. Results closely parallel continuous-response findings reported earlier: conformity was greater on subjective items (attitudes) in the experimental condition than in the control, but on objective items (visual judgments) controls conformed more than experimental Ss.

Table 4

Mean Conformity Scores of Individually Analyzed Items in Control and Experimental Conditions

Item Type	Control	Experimental	t
1. Information	.33	.20	1.24
2. Numerical	.28	.11	2.79***
3. Number Series	.38	.32	.87
4. Spelling	.11	.04	1.85*
5. Synonyms	.20	.25	.66
6. Visual Preference	.22	.09	2.09**
7. Visual Insoluble	.32	.68	3.91***
8. Number Series Insoluble	.63	.72	1.12

Note: All t tests are two-tailed tests.
*p < .10
**p < .05
***p < .01

IV

DISCUSSION

One interesting finding of the present study concerned the magnitude of the average intercorrelation among continuous-response items (visual and opinion) in the experimental and control conditions. Results indicate that control Ss reacted more uniformly to group pressure across items of the same type than did Ss who received creativity training; that is, the control Ss exhibited a stronger tendency either to generally accept or reject group pressure across similar types of items than did experimental Ss. It is interesting to note that creativity training did not produce anticonformers who dissented from the group for the sake of dissent. Rather, Ss who received the training tended to utilize the groups' answers selectively, relying on the group on some items but not on others. Our findings for control Ss corroborate previous research showing that Ss under social pressure respond quite consistently to group pressure (Crutchfield, 1955; Tuddenham, 1958). The inconsistency in responding to group pressure exhibited by the experimental Ss helps explain the limited overall conformity reduction produced by creativity training. Lack of consistent reaction to group pressure across items may actually have attenuated overall conformity reduction in the experimental condition.

Turning now to other conformity data, the present study found that the relation between IQ level and conformity differed for the control and the experimental conditions. In the control condition an inverse relation existed between IQ and conformity: amount of conformity increased as the level of IQ decreased. Previous investigations (Nakamura, 1958; Tuddenham, 1959) have also found a negative relation between IQ and conformity. Contrary to typical findings, experimental Ss did not show an increase in conformity as IQ level decreased; the amount of conformity was quite uniform across IQ levels. The creativity training produced an overall decrease in susceptibility to group pressure for Ss having low IQ but not for Ss having average and high IQ. One explanation for the finding is that the training program increased positive attitudes toward creativity and improved problem-solving skills, both of which may have transferred to the conformity situation. The improvement in skills would transfer by increasing task-oriented, as opposed to social-oriented, motivation; low IQ Ss, who probably have the least task-oriented motivation, would benefit most. An improvement in both skills and attitude could indirectly affect response to group pressure by changing self-confidence. An increase in self-confidence would be expected to produce less conformity (Fagen, 1963; Hochbaum, 1954). Since it is probable that low IQ Ss are initially lowest in self-confidence (which might also help account for their high conformity in the control condition), increasing confidence by creativity training would benefit low IQ Ss most.

Three additional factors may have been partially responsible for limiting the overall effect of creativity training primarily to low IQ Ss. First, the creativity training program produced less dramatic differences between trained and control Ss than found in prior studies (Covington and Crutchfield, 1965; Crutchfield, 1966). It will be recalled that the Racine training materials were administered under less than optimal conditions for obtaining maximal enhancement of creativity. Had the effects of creativity training been stronger, a greater difference in overall conformity between control and experimental conditions might have been manifested with all IQ groups, instead of with only the low IQ group. Second, the conformity experiment was conducted three weeks after the conclusion of creativity training. Perhaps the effects of training dissipated somewhat during this interval, attenuating subsequent differences between control and experimental Ss in the conformity situation. Third, the group pressure technique used in the present study typically induces less conformity than other methods. In our study, Ss responded privately to an announced group norm. Previous research has found that greater conformity pressure is

induced by public responding and face-to-face interaction with the group (Deutsch and Gerard, 1955). Techniques producing more intense social pressure would have caused greater conformity among the control Ss at all IQ levels, thereby making possible a greater conformity difference between the control and experimental conditions.

The differential effect of creativity training by type of item sheds light on an interesting question: Precisely what aspects of the creativity training transferred to the conformity situation? Results showed that control Ss conformed more than experimentals on visual items, while experimental Ss conformed slightly more than controls on attitude items. The creativity training does not seem to produce a general effect on conformity to the group. Another instance of the selective efficacy of creativity training on conformity was found on the individually analyzed items. Control Ss conformed slightly more than experimentals on items having objectively correct answers, but experimental Ss conformed more than controls on two of the three items having indeterminate answers.

It appears, then, that the transfer from creativity training to behavior in the social pressure situation was rather specific; Ss became more independent primarily on items having objectively correct answers. Thus, the problem-solving skills enhanced by creativity training transferred only to behavior requiring similar skills. Recall that results of the Racine program indicated that the training was more successful in increasing problem-solving skills (convergent thinking) than originality (divergent thinking). Thus Ss' behavior under group pressure is congruent with findings for the creativity training.

Evidence from the present study suggests that the relation between conformity and creativity is complex and perhaps mediated by unconsidered variables. We can conclude, however, that creativity does seem causally related to conformity. Further research will be required to explicate fully the psychological mechanisms linking creativity and conformity.

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